PATENT COOPERATION TREATY

From the
INTERNATIONAL SEARCHING AUTHORITY

To:
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PCT

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

(PCT Rule 43*bis*.1)

Date of mailing *(day/month/year)*	25. 5. 2004
Applicant's or agent's file reference	FOR FURTHER ACTION See paragraph 2 below
CFO17899WO	

International application No.	International filing date *(day/month/year)*	Priority date *(day/month/year)*
PCT/JP2004/001423	10.02.2004	14.02.2003

International Patent Classification (IPC) or both national classification and IPC
Int.Cl⁷ H01L27/146,G01T1/24,H04N5/32

Applicant
CANON KABUSHIKI KAISHA

1. This opinion contains indications relating to the following items:

- [x] Box No. I Basis of the opinion
- [ ] Box No. II Priority
- [ ] Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- [ ] Box No. IV Lack of unity of invention
- [x] Box No. V Reasoned statement under Rule 43*bis*.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- [ ] Box No. VI Certain documents cited
- [ ] Box No. VII Certain defects in the international application
- [ ] Box No. VIII Certain observations on the international application

2. FURTHER ACTION

If a demand for international preliminary examination is made, this opinion will be considered to be a written opinion of the International Preliminary Examining Authority ("IPEA") except that this does not apply where the applicant chooses an Authority other than this one to be the IPEA and the chosen IPEA has notified the International Bureau under Rule 66.1bis(b) that written opinions of this International Searching Authority will not be so considered.

If this opinion is, as provided above, considered to be a written opinion of the IPEA, the applicant is invited to submit to the IPEA a written reply together, where appropriate, with amendments, before the expiration of 3 months from the date of mailing of Form PCT/ISA/220 or before the expiration of 22 months from the priority date, whichever expires later.

For further options, see Form PCT/ISA/220.

3. For further details, see notes to Form PCT/ISA/220.

Name and mailing address of the ISA/JP	Authorized officer	
Japan Patent Office	KYOICHI SAITO	4L 8122
3-4-3, Kasumigaseki, Chiyoda-ku, Tokyo 100-8915, Japan	Telephone No. +81-3-3581-1101 Ext. 3498	

WRITTEN OPINION OF THE INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/JP2004/001423

Box No. I Basis of the opinion

1. With regard to the language, this opinion has been established on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This opinion has been established on the basis of a translation from the original language into the following language _____, which is the language of a translation furnished for the purposes of international search (under Rules 12.3 and 23.1(b)).

2. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application and necessary to the claimed invention, this opinion has been established on the basis of:

a. type of material

☐ a sequence listing
☐ table(s) related to the sequence listing

b. format of material

☐ in written format
☐ in computer readable form

c. time of filing/furnishing

☐ contained in the international application as filed.
☐ filed together with the international application in computer readable form.
☐ furnished subsequently to this Authority for the purposes of search.

3. ☐ In addition, in the case that more than one version or copy of a sequence listing and/or table relating thereto has been filed or furnished, the required statements that the information in the subsequent or additional copies is identical to that in the application as filed or does not go beyond the application as filed, as appropriate, were furnished.

4. Additional comments:

WRITTEN OPINION OF THE
INTERNATIONAL SEARCHING AUTHORITY

International application No.
PCT/JP2004/ 001423

Box No. V **Reasoned statement under Rule 43bis.1(a)(i) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

1. Statement

Novelty (N)	Claims	2-6,8-12,14-18	YES
	Claims	1,7,13,19,20	NO
Inventive step (IS)	Claims		YES
	Claims	1-20	NO
Industrial applicability (IA)	Claims	1-20	YES
	Claims		NO

2. Citations and explanations

D1:JP 2002-26300 A(SHARP CORPORATION)2002.01.25,
D2:JP 2000-12866 A(TOSHIBA CORPORATION)2000.01.14,
D3:JP 63-172470 A(FUJITSU LIMITED)1988.07.16

Novelty
The subject matters of claims 1,7,13,19,20 do not appear to be novel with respect to D1.
D1 discloses a photoelectric converter, comprising a plurality of pixels each comprising a sensor element for converting incident light into an electrical signal and a thin film tran sistor connected to the sensor element.
And D1(【0057】 paragraph) teaches that it is possible to form a staggered thin film tran sistor (a top gate type structure TFT).

Inventive step
The subject matters of claims 2-6,8-12,14-16 do not appear to involve an inventive ste p in view of D1 and D2.
D2 discloses a photoelectric converter, comprising a double gate type structure TFT (a p lurality of thin film transistors which are connected in series with one another and which use a same gate wiring).
And D2(figs.9-11) discloses a photoelectric converter, comprising a resetting thin film tr ansistor and an amplifying thin film transistor.
The skilled person in the art would easily conceive the idea of employing the feature in D2 to substitute the feature disclosed in D1.

The subject matters of claims 17,18 do not appear to involve an inventive step in view of D1,D2 and D3.
D3 discloses an insulating layer formed between the insulating substrate and the thin fil m transistors.
The skilled person in the art would easily conceive the idea of employing the feature in D3 to substitute the feature disclosed in D1 and D2.